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Performance of castor (*Ricinus communis*) and greengram (*Vigna radiata*) in agroforestry systems in semi-arid tropics

KorwarG. R., PratibhaG., RaviV., KumarD. Palani

Central Research Institute for Dryland Agriculture, Santoshanagar, Hyderabad, Andhra Pradesh 500 059.

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Abstract

A 3-year study was conducted at the Central Research Institute for Dryland Agriculture, Hyderabad, during in rainy seasons of 2002, 2003 and 2004, to evaluate the influence of 3 agroforestry tree species, viz amla (Emblica officinalis Gaertn.), tamarind (Tamarindus indicus L.) and (Acacia senegal Willd.) on the growth and yield of castor (Ricinus communis L.) and greengram [Vigna radiata (L.) Wilczek] under rainfed conditions. The yields of arable intercrops were significantly influenced by the trees. Maximum reduction was observed with A. senegal and the minimum with amla. With increase in age of trees, more reduction in arable crop yield was observed. Pooled over years, the grain yield of greengram was similar in sole crop and as intercrop with the 3 tree species. But in castor sole crop was superior to intercropping with tree species. Among the tree species, castor intercroped with alma and tamarind being at par were superior to A. senegal. Economic analysis showed the superiority of agroforestry systems over sole crop systems.

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Key words

Agroforestry, Amla, Acacia senegal, Castor, Greengram, Tamarind.

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